

## GT3A Series — Analog Timers

## Key features:

- 4 selectable operation modes on each model
- External start, reset, and gate inputs
- Panel mount or socket mount
- Large variety of timing functions
- Power and output status indicating LEDs



## Specifications

|                                 | GT3A-1                                                                                                                                                                      | GT3A-2                                | GT3A-3                                              | GT3A-4,-5,-6                                     |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------------|--------------------------------------------------|
| Operation                       | Multi-mode                                                                                                                                                                  |                                       |                                                     | Multi-mode with inputs (11 pins)                 |
| Time Range                      | 0.1s to 180 hours                                                                                                                                                           |                                       |                                                     |                                                  |
| Rated Voltage                   | 100 to 240V AC, 50/60Hz<br>12V DC<br>24V AC, 50/60Hz / 24V DC                                                                                                               |                                       |                                                     |                                                  |
| Contact Ratings                 | 125V AC/250V AC, 3A;<br>30V DC, 1A (resistive load)                                                                                                                         |                                       | 125V AC/250V AC, 5A;<br>30V DC, 5A (resistive load) |                                                  |
| Minimum Applicable Load         | 5V, 10mA (reference value)                                                                                                                                                  |                                       |                                                     |                                                  |
| Voltage Tolerance               | AF20 (100V AC): 85 to 264V AC<br>AD24: 20.4 to 26.4V AC/21.6 to 26.4V DC<br>D12: 10.8 to 13.2V DC                                                                           |                                       |                                                     |                                                  |
| Error                           | ±0.2%, ±10 msec (repeat, voltage, temperature)                                                                                                                              |                                       |                                                     |                                                  |
| Setting Error                   | ±10% maximum                                                                                                                                                                |                                       |                                                     |                                                  |
| Reset Time                      | 60msec maximum                                                                                                                                                              |                                       |                                                     |                                                  |
| Insulation Resistance           | 100MW minimum                                                                                                                                                               |                                       |                                                     |                                                  |
| Dielectric Strength             | Between power and output terminals: 2,000V AC, 1 minute<br>Between contacts of different poles: 2,000V AC, 1 minute<br>Between contacts of the same pole: 750V AC, 1 minute |                                       |                                                     |                                                  |
| Power Consumption (approximate) | Delayed SPDT                                                                                                                                                                | Delayed SPDT + instantaneous SPDT     | Delayed DPDT                                        | Delayed DPDT                                     |
|                                 | 10.8VA<br>(200V AC, 60Hz)                                                                                                                                                   | 13.5VA<br>(200V AC, 60Hz)             | 14.4VA<br>(200V AC, 60Hz)                           | 4.7VA (100V AC, 60Hz),<br>14.4VA (200V AC, 60Hz) |
|                                 | —                                                                                                                                                                           | 12VDC/1W<br>24VDC/0.7W<br>24VAC/1.2VA | 12VDC/1.1W<br>24VDC/0.6W<br>24VAC/1.3VA             | 12VDC/0.8W<br>24VDC/0.6W<br>24VAC/1.3VA          |
| Mechanical Life                 | 10,000,000 operations minimum                                                                                                                                               |                                       | 5,000,000 operations minimum                        |                                                  |
| Electrical Life                 | 50,000 operations minimum (rated load)                                                                                                                                      |                                       | 100,000 operations minimum (rated load)             |                                                  |
| Weight (approximate)            | 63g                                                                                                                                                                         | 73g                                   | 79g                                                 | 80g                                              |
| Vibration Resistance            | 100m/sec <sup>2</sup> (approximate 10G)                                                                                                                                     |                                       |                                                     |                                                  |
| Shock Resistance                | Operating extremes: 100m/sec <sup>2</sup> (approximate 10G)<br>Damage limits: 500m/sec <sup>2</sup> (approximate 50G)                                                       |                                       |                                                     |                                                  |
| Operating Temperature           | −10 to +50°C                                                                                                                                                                |                                       |                                                     |                                                  |
| Operating Humidity              | 45 to 85% RH                                                                                                                                                                |                                       |                                                     |                                                  |
| Storage Temperature             | −30 to +80°C                                                                                                                                                                |                                       |                                                     |                                                  |
| Housing Color                   | Gray                                                                                                                                                                        |                                       |                                                     |                                                  |



## Part Numbers

## GT3A-1, -2, -3

| Mode Of Operation                                          | Rated Voltage Code                                                             | Time Range               | Output                                   | Contact                           | Complete Part No. |             |
|------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------|------------------------------------------|-----------------------------------|-------------------|-------------|
|                                                            |                                                                                |                          |                                          |                                   | 8-Pin             | 11-Pin      |
| A: ON-delay 1<br>B: Interval 1<br>C: Cycle 1<br>D: Cycle 3 | AF20: 100 to 240V AC (50/60Hz)                                                 | 0.1 seconds to 180 hours | 250V AC, 3A, 30V DC, 1A (resistive load) | Delayed SPDT                      | GT3A-1AF20        | GT3A-1EAF20 |
|                                                            | AF20: 100 to 240V AC (50/60Hz)<br>D12: 12V DC<br>AD24: 24V AC (50/60Hz)/24V DC |                          |                                          | Delayed SPDT + Instantaneous SPDT | GT3A-2AF20        | GT3A-2EAF20 |
|                                                            |                                                                                |                          |                                          |                                   | GT3A-2D12         | GT3A-2ED12  |
|                                                            |                                                                                |                          | GT3A-2AD24                               |                                   | GT3A-2EAD24       |             |
|                                                            |                                                                                |                          | 240V AC, 5A, 24V DC, 5A (resistive load) | Delayed DPDT                      | GT3A-3AF20        | GT3A-3EAF20 |
|                                                            | GT3A-3D12                                                                      |                          |                                          |                                   | GT3A-3ED12        |             |
|                                                            | GT3A-3AD24                                                                     |                          |                                          |                                   | GT3A-3EAD24       |             |



1. For wiring schematics and timing diagrams for GT3A-1, -2, -3, see pages page 845 and page 846 respectively.
2. For more details about time ranges, see instructions on page page 850.
3. For socket and accessory part numbers, see page 860.

## GT3A-4, -5, -6

| Mode of Operation                                                                       | Rated Voltage Code                                                             | Time Range               | Output                                   | Contact      | Input            | Complete Part No. |             |  |  |  |            |             |  |  |  |  |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------|------------------------------------------|--------------|------------------|-------------------|-------------|--|--|--|------------|-------------|--|--|--|--|
|                                                                                         |                                                                                |                          |                                          |              |                  | A (11-pin)        | B (11-pin)  |  |  |  |            |             |  |  |  |  |
| A: ON-Delay 2<br>B: Cycle 2<br>C: Signal ON/OFF-Delay 1<br>D: Signal OFF-Delay 1        | AF20: 100 to 240V AC (50/60Hz)<br>D12: 12V DC<br>AD24: 24V AC (50/60Hz)/24V DC | 0.1 seconds to 180 hours | 250V AC, 5A, 24V DC, 5A (resistive load) | Delayed DPDT | Start Reset Gate | GT3A-4AF20        | GT3A-4EAF20 |  |  |  |            |             |  |  |  |  |
|                                                                                         |                                                                                |                          |                                          |              |                  | GT3A-4D12         | GT3A-4ED12  |  |  |  |            |             |  |  |  |  |
|                                                                                         |                                                                                |                          |                                          |              |                  | GT3A-4AD24        | GT3A-4EAD24 |  |  |  |            |             |  |  |  |  |
| A: Interval 2<br>B: One-Shot Cycle<br>C: Signal ON/OFF-Delay 2<br>D: Signal OFF-Delay 2 | AF20: 100 to 240V AC (50/60Hz)<br>AD24: 24V AC (50/60Hz)/24V DC                |                          |                                          |              |                  | GT3A-5AF20        | GT3A-5EAF20 |  |  |  |            |             |  |  |  |  |
|                                                                                         |                                                                                |                          |                                          |              |                  | GT3A-5AD24        | GT3A-5EAD24 |  |  |  |            |             |  |  |  |  |
| A: One-Shot<br>B: One-Shot ON-Delay<br>C: One-Shot 2<br>D: Signal ON/OFF-Delay 3        |                                                                                |                          |                                          |              |                  |                   |             |  |  |  | GT3A-6AF20 | GT3A-6EAF20 |  |  |  |  |
|                                                                                         |                                                                                |                          |                                          |              |                  |                   |             |  |  |  | GT3A-6AD24 | GT3A-6EAD24 |  |  |  |  |

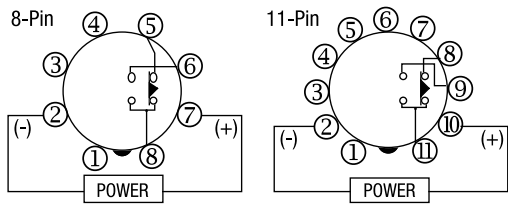


4. For wiring schematics and timing diagrams GT3A-4, -5, -6, see pages 832, 833, and 833 respectively.
5. For more details about time ranges, see instructions on page 850.
6. A (11-pin) and B (11-pin) differ in the way inputs are wired.
7. For socket and accessory part numbers, see page 860.
8. For the timing diagrams overview, see page 832.

Timing Diagrams/Schematics

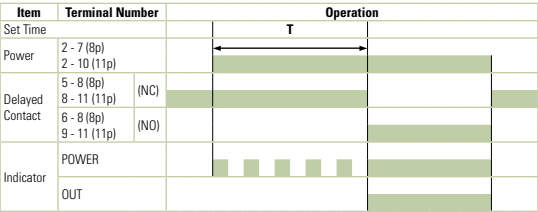
GT3A-1 Timing Diagrams  
Delayed SPDT

Operation  
Mode  
Selection



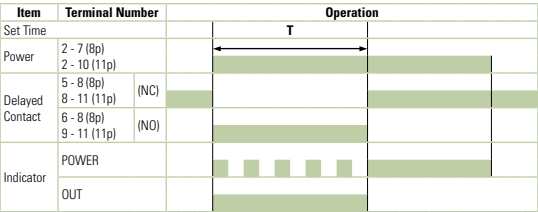
ON-Delay 1

MODE



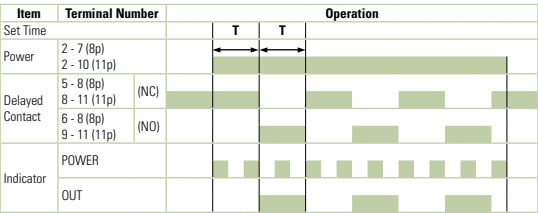
Interval 1

MODE



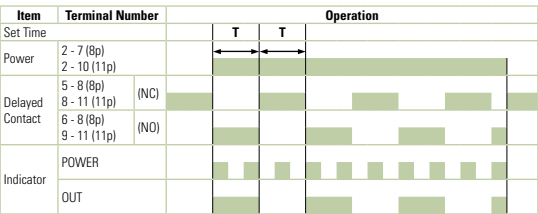
Cycle 1  
(OFF first)

MODE



Cycle 3  
(ON first)

MODE



Switches & Pilot Lights

Signaling Lights

Relays & Sockets

Timers

Contactors

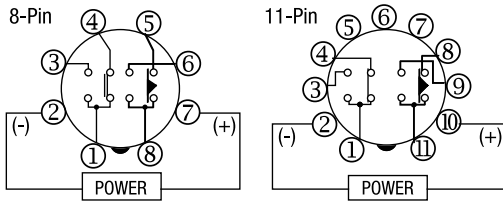
Terminal Blocks

Circuit Breakers

## GT3A-2 Timing Diagrams

### Delayed SPDT + Instantaneous SPDT

Operation  
Mode  
Selection



#### ON-Delay 1

MODE



| Item                  | Terminal Number                                                    | Operation |
|-----------------------|--------------------------------------------------------------------|-----------|
| Set Time              | 2 - 7 (8p)<br>2 - 10 (11p)                                         | T         |
| Power                 | 5 - 8 (8p)<br>8 - 11 (11p) (NC)<br>6 - 8 (8p)<br>9 - 11 (11p) (NO) |           |
| Delayed Contact       | 1 - 4 (NC)<br>1 - 3 (NO)                                           |           |
| Instantaneous Contact | POWER<br>OUT                                                       |           |

#### Interval 1

MODE



| Item                  | Terminal Number                                                    | Operation |
|-----------------------|--------------------------------------------------------------------|-----------|
| Set Time              | 2 - 7 (8p)<br>2 - 10 (11p)                                         | T         |
| Power                 | 5 - 8 (8p)<br>8 - 11 (11p) (NC)<br>6 - 8 (8p)<br>9 - 11 (11p) (NO) |           |
| Delayed Contact       | 1 - 4 (NC)<br>1 - 3 (NO)                                           |           |
| Instantaneous Contact | POWER<br>OUT                                                       |           |

#### Cycle 1 (OFF first)

MODE



| Item                  | Terminal Number                                                    | Operation |
|-----------------------|--------------------------------------------------------------------|-----------|
| Set Time              | 2 - 7 (8p)<br>2 - 10 (11p)                                         | T T       |
| Power                 | 5 - 8 (8p)<br>8 - 11 (11p) (NC)<br>6 - 8 (8p)<br>9 - 11 (11p) (NO) |           |
| Delayed Contact       | 1 - 4 (NC)<br>1 - 3 (NO)                                           |           |
| Instantaneous Contact | POWER<br>OUT                                                       |           |

#### Cycle 3 (ON first)

MODE

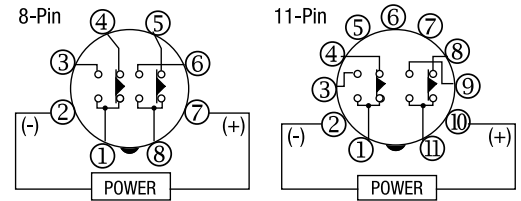


| Item                  | Terminal Number                                                    | Operation |
|-----------------------|--------------------------------------------------------------------|-----------|
| Set Time              | 2 - 7 (8p)<br>2 - 10 (11p)                                         | T T       |
| Power                 | 5 - 8 (8p)<br>8 - 11 (11p) (NC)<br>6 - 8 (8p)<br>9 - 11 (11p) (NO) |           |
| Delayed Contact       | 1 - 4 (NC)<br>1 - 3 (NO)                                           |           |
| Instantaneous Contact | POWER<br>OUT                                                       |           |

## GT3A-3 Timing Diagrams

### Delayed DPDT

Operation  
Mode  
Selection



#### ON-Delay 1

MODE



| Item            | Terminal Number                                                                                | Operation |
|-----------------|------------------------------------------------------------------------------------------------|-----------|
| Set Time        | 2 - 7 (8p)<br>2 - 10 (11p)                                                                     | T         |
| Power           | 1 - 4, 5 - 8 (8p)<br>1 - 4, 8 - 11 (11p) (NC)<br>1 - 3, 6 - 8 (8p)<br>1 - 3, 9 - 11 (11p) (NO) |           |
| Delayed Contact | POWER<br>OUT                                                                                   |           |

#### Interval 1

MODE



| Item            | Terminal Number                                                                                | Operation |
|-----------------|------------------------------------------------------------------------------------------------|-----------|
| Set Time        | 2 - 7 (8p)<br>2 - 10 (11p)                                                                     | T         |
| Power           | 1 - 4, 5 - 8 (8p)<br>1 - 4, 8 - 11 (11p) (NC)<br>1 - 3, 6 - 8 (8p)<br>1 - 3, 9 - 11 (11p) (NO) |           |
| Delayed Contact | POWER<br>OUT                                                                                   |           |

#### Cycle 1 (OFF first)

MODE



| Item            | Terminal Number                                                                                | Operation |
|-----------------|------------------------------------------------------------------------------------------------|-----------|
| Set Time        | 2 - 7 (8p)<br>2 - 10 (11p)                                                                     | T T       |
| Power           | 1 - 4, 5 - 8 (8p)<br>1 - 4, 8 - 11 (11p) (NC)<br>1 - 3, 6 - 8 (8p)<br>1 - 3, 9 - 11 (11p) (NO) |           |
| Delayed Contact | POWER<br>OUT                                                                                   |           |

#### Cycle 3 (ON first)

MODE



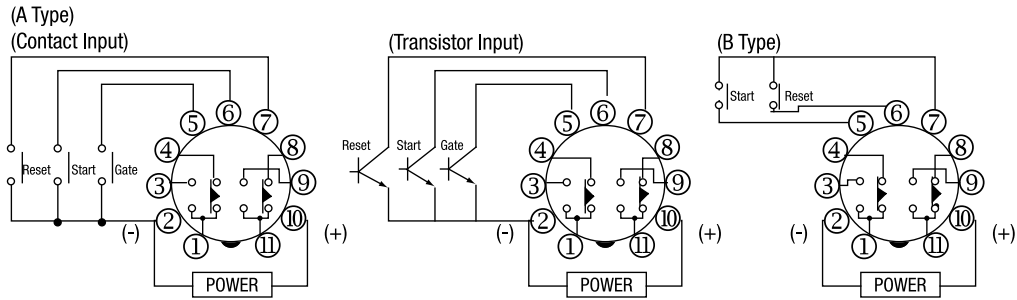
| Item            | Terminal Number                                                                                | Operation |
|-----------------|------------------------------------------------------------------------------------------------|-----------|
| Set Time        | 2 - 7 (8p)<br>2 - 10 (11p)                                                                     | T T       |
| Power           | 1 - 4, 5 - 8 (8p)<br>1 - 4, 8 - 11 (11p) (NC)<br>1 - 3, 6 - 8 (8p)<br>1 - 3, 9 - 11 (11p) (NO) |           |
| Delayed Contact | POWER<br>OUT                                                                                   |           |



Note: Pins 1, 3, and 4 are the instantaneous contacts.

GT3A-4 Timing Diagrams  
Delayed DPDT

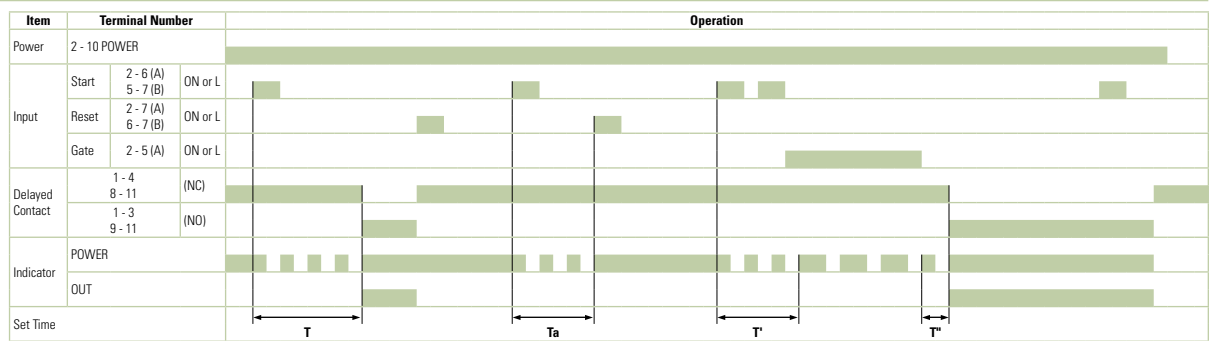
Operation  
Mode Selection



ON-Delay 2

MODE

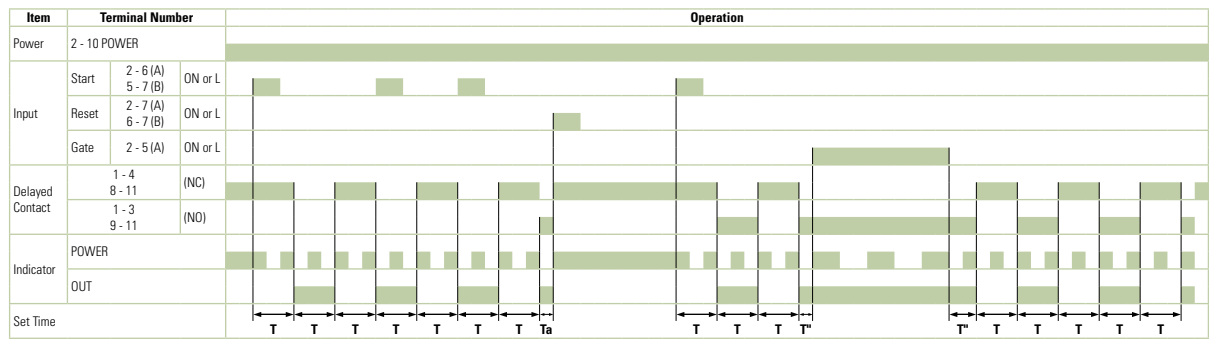
A



Cycle 2

MODE

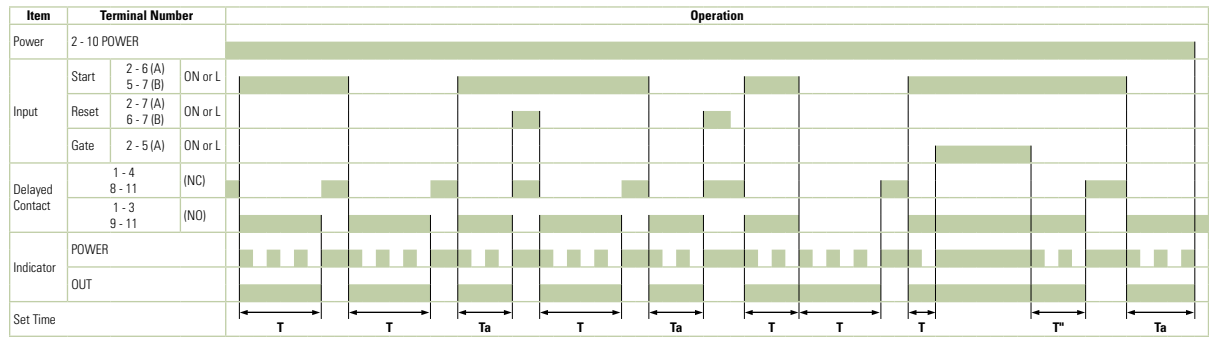
B



Signal ON/OFF-Delay 1

MODE

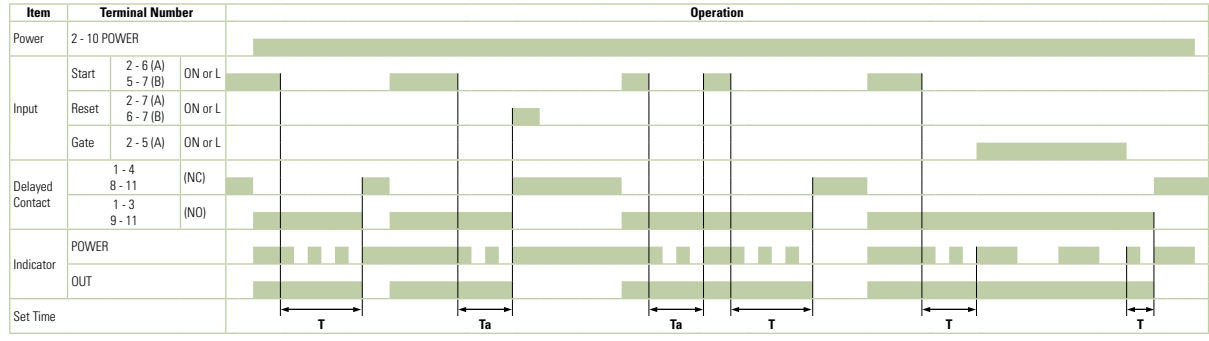
C



Signal OFF-Delay 1

MODE

D

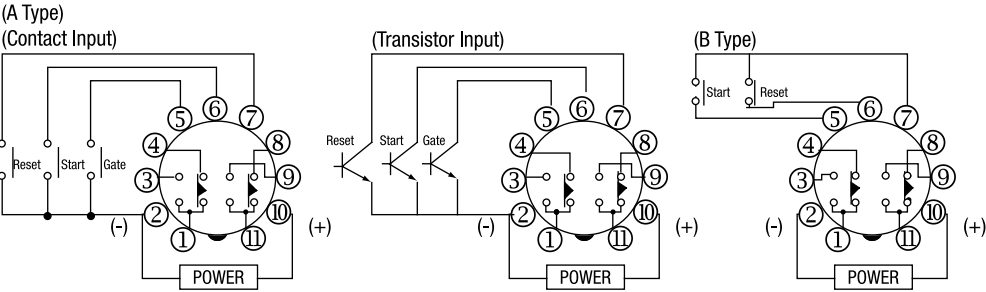


T = Set time    Ta = Shorter than set time  
T = T' + T\*

Switches & Pilot Lights  
Signaling Lights  
Relays & Sockets  
Timers  
Contactors  
Terminal Blocks  
Circuit Breakers

GT3A-5 Timing Diagrams  
Delayed DPDT

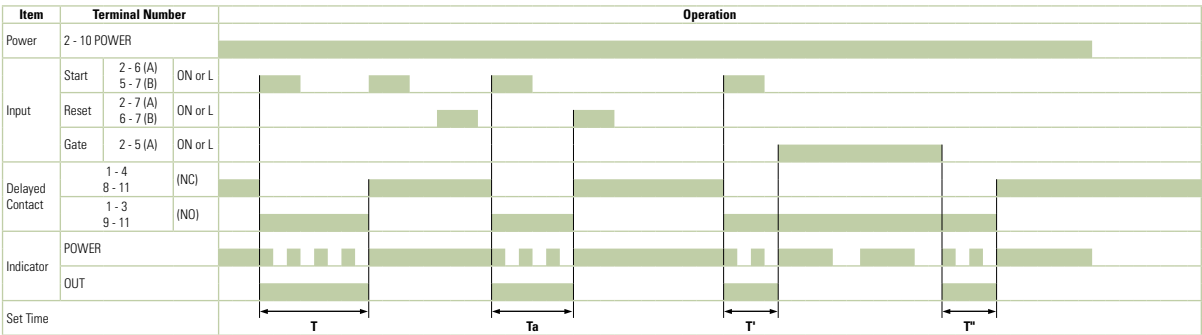
Operation  
Mode Selection



Interval 2

MODE

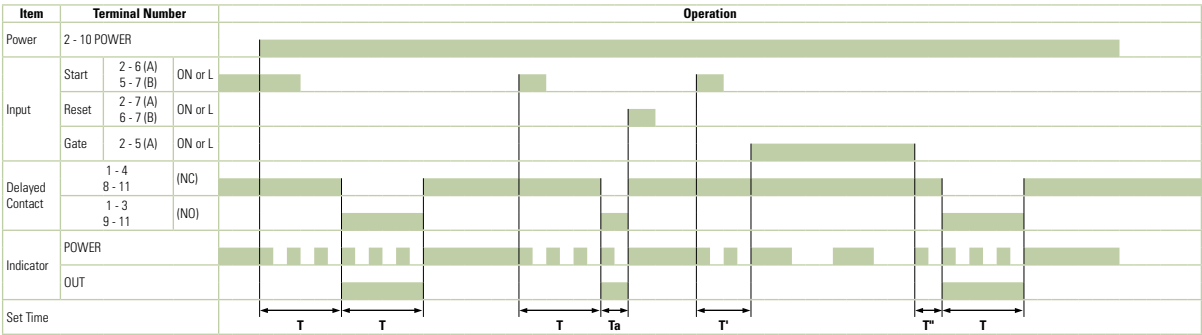
A



One-Shot Cycle

MODE

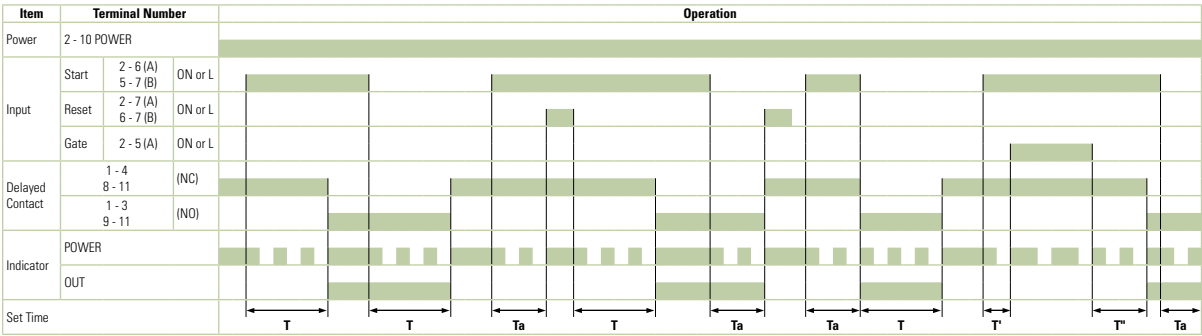
B



Signal ON/OFF-Delay 2

MODE

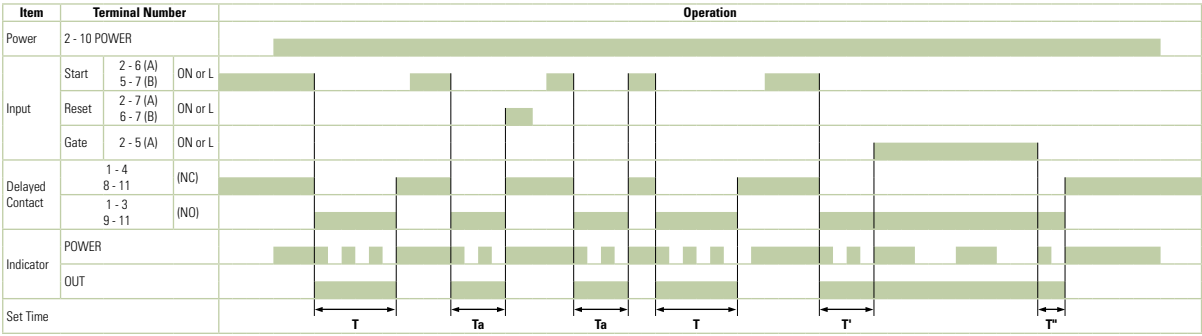
C



Signal OFF-Delay 2

MODE

D

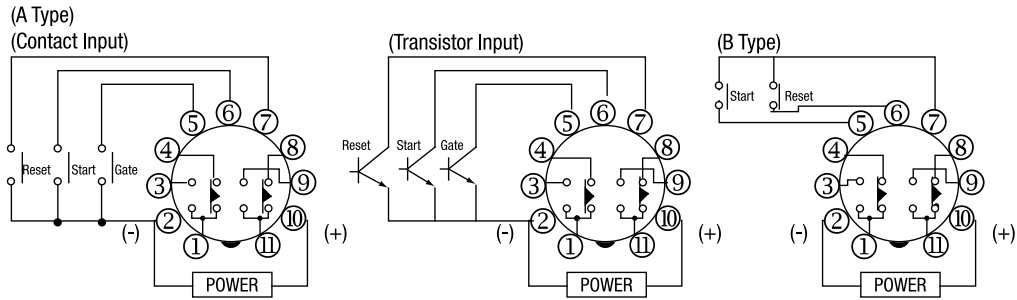


T = Set time Ta = Shorter than set time  
T = T' + T''



GT3A-6 Timing Diagrams  
Delayed DPDT

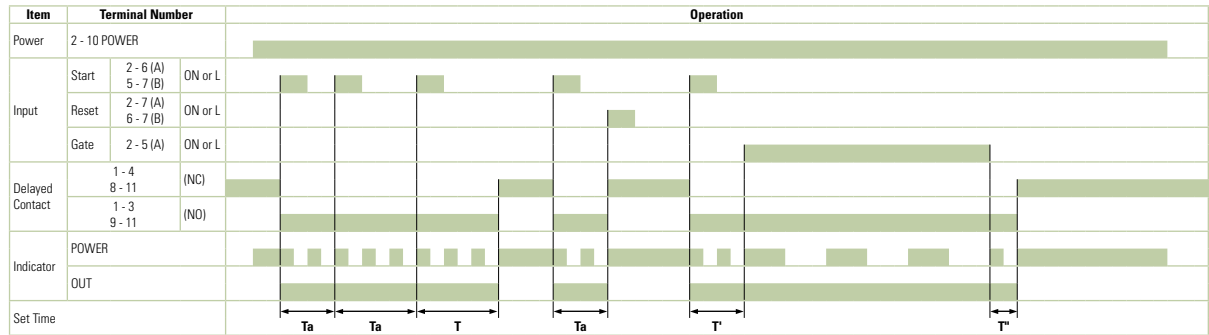
Operation  
Mode Selection



One-Shot 1

MODE

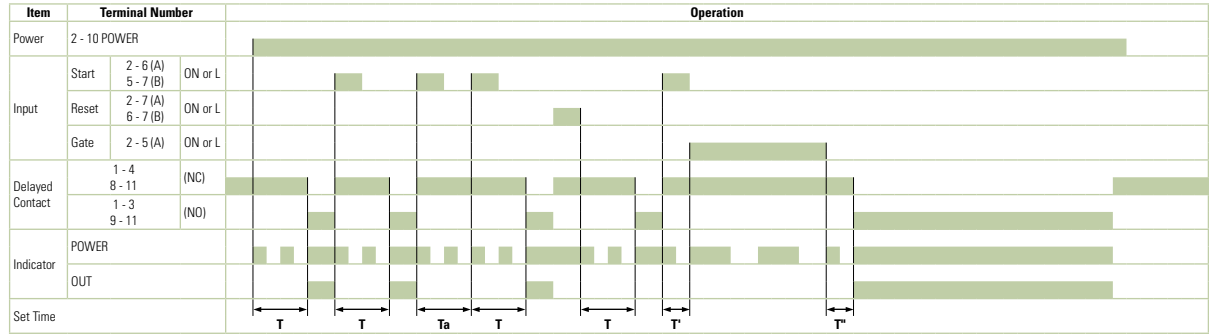
A



One-Shot ON-Delay

MODE

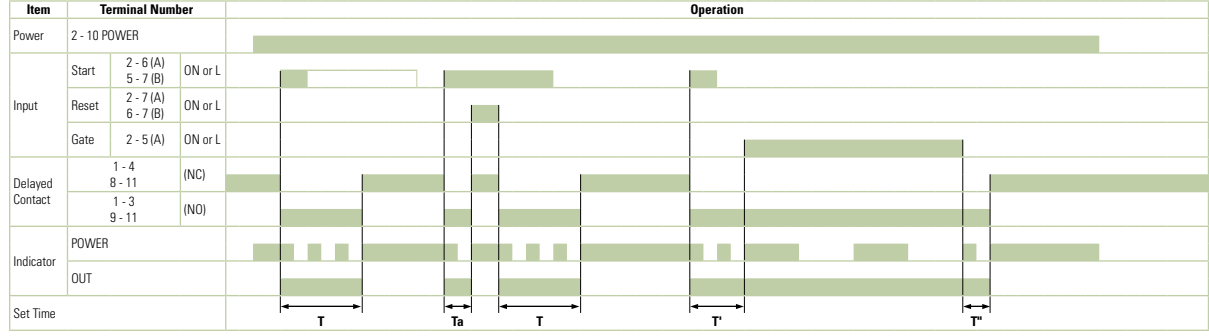
B



One-Shot 2

MODE

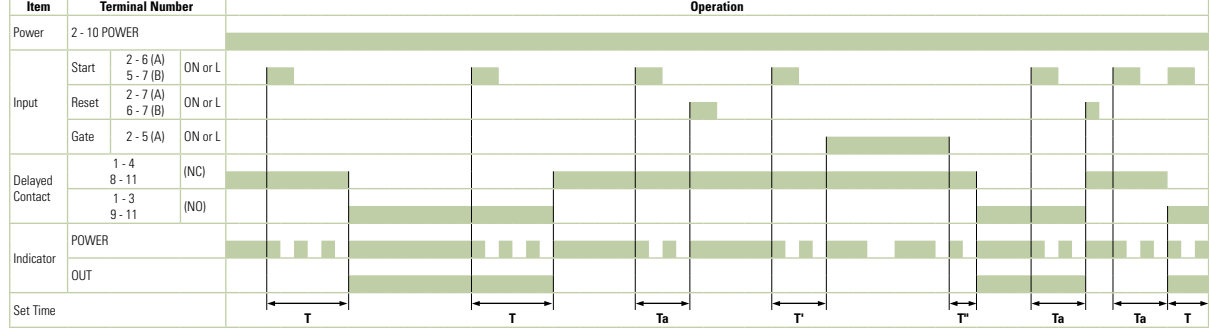
C



Signal ON/OFF-Delay 3

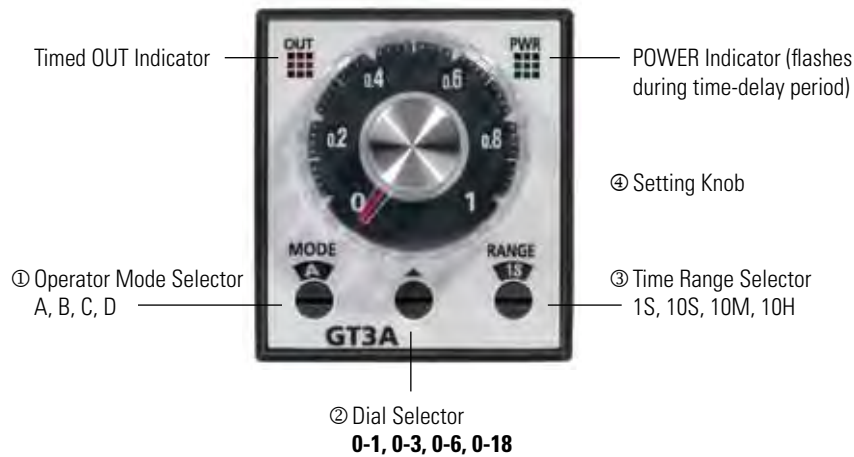
MODE

D



T = Set time    Ta = Shorter than set time  
T = T' + T''

## Instructions: Setting GT3A Series Timers



| Step 1.                                                             | Desired Mode of Operation  |                       | Selection                 |                       | Remarks                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------|----------------------------|-----------------------|---------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Select the desired mode of operation.                               | For Timers                 | Mode of Operation     | ① Operation Mode Selector |                       | The desired operation mode can be selected from the A, B, C, and D modes using the Operation Mode Selector. Change the operation mode from A to B, C, and D in turn by turning the operation mode selector clockwise using a flat screwdriver which is a maximum of 0.156" (4mm) wide. The selected mode is displayed in the window. |
|                                                                     | GT3A-1<br>GT3A-2<br>GT3A-3 | ON-delay 1            | A                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     |                            | Interval 1            | B                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     |                            | Cycle 1               | C                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     |                            | Cycle 3               | D                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | GT3A-4                     | ON-delay 2            | A                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     |                            | Cycle 2               | B                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     |                            | Signal ON/OFF-delay 1 | C                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     |                            | Signal OFF-delay 1    | D                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | GT3A-5                     | Interval 2            | A                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     |                            | One-shot cycle        | B                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     |                            | Signal ON/OFF-delay 2 | C                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     |                            | Signal OFF-delay 2    | D                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | GT3A-6                     | One-shot 1            | A                         |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     |                            | One-shot ON-delay     | B                         |                       |                                                                                                                                                                                                                                                                                                                                      |
| One-shot 2                                                          |                            | C                     |                           |                       |                                                                                                                                                                                                                                                                                                                                      |
| Signal ON/OFF-delay 3                                               |                            | D                     |                           |                       |                                                                                                                                                                                                                                                                                                                                      |
| Step 2.                                                             | Desired Time Range         |                       | Selection                 |                       | Remarks                                                                                                                                                                                                                                                                                                                              |
| Select the time range that contains the desired time period.        | Time Ranges                |                       | ② Dial Selector           | ③ Time Range Selector | The desired time range is selected by setting both ② Dial Selector and ③ Time Range Selector.                                                                                                                                                                                                                                        |
|                                                                     | 0.1 seconds to 1 second    |                       | 0-1                       | 1S                    |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 0.1 seconds to 3 seconds   |                       | 0-3                       |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 0.1 seconds to 6 seconds   |                       | 0-6                       |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 0.15 seconds to 18 seconds |                       | 0-18                      |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 0.1 seconds to 10 seconds  |                       | 0-1                       | 10S                   |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 0.3 seconds to 30 seconds  |                       | 0-3                       |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 0.6 seconds to 60 seconds  |                       | 0-6                       |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 1.8 seconds to 180 seconds |                       | 0-18                      |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 6 seconds to 10 minutes    |                       | 0-1                       | 10M                   |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 18 seconds to 30 minutes   |                       | 0-3                       |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 36 seconds to 60 minutes   |                       | 0-6                       |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 108 seconds to 180 minutes |                       | 0-18                      |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 6 minutes to 10 hours      |                       | 0-1                       | 10H                   |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 18 minutes to 30 hours     |                       | 0-3                       |                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                     | 36 minutes to 60 hours     |                       | 0-6                       |                       |                                                                                                                                                                                                                                                                                                                                      |
| 108 minutes to 180 hours                                            |                            | 0-18                  |                           |                       |                                                                                                                                                                                                                                                                                                                                      |
| Step 3.                                                             | Selection                  |                       |                           |                       |                                                                                                                                                                                                                                                                                                                                      |
| Set the precise period of time desired by using the ④ Setting Knob. |                            |                       |                           |                       |                                                                                                                                                                                                                                                                                                                                      |

## GT3F Series – True Power OFF Delay Timers

### Key features:

- “True” power OFF-delay up to 10 minutes
- No external control switch necessary
- Available with reset inputs
- Mountable in sockets or flush panel



### Specifications

|                                | GT3F-1                                                                                                                                                                                                                           | GT3F-2                                 |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Operation                      | True power OFF-delay                                                                                                                                                                                                             |                                        |
| Time Range                     | 0.1 seconds to 600 seconds                                                                                                                                                                                                       |                                        |
| Rated Voltage                  | 100 to 240V AC, 50/60Hz<br>24V AC/DC                                                                                                                                                                                             |                                        |
| Contact Rating                 | 250V AC/24V DC, 5A<br>(resistive load)                                                                                                                                                                                           | 250V AC/24V DC, 3A<br>(resistive load) |
| Contact Form                   | SPDT                                                                                                                                                                                                                             | DPDT                                   |
| Minimum Power Application Time | 1 second                                                                                                                                                                                                                         |                                        |
| Voltage Tolerance              | AF20: 100 to 240V AC<br>AD24: 21.6 to 26.4VDC, 20.4 to 26.4VAC                                                                                                                                                                   |                                        |
| Repeat Error                   | ±0.2%, ±10 msec                                                                                                                                                                                                                  |                                        |
| Voltage Error                  | ±0.2%, ±10 msec                                                                                                                                                                                                                  |                                        |
| Temperature Error              | ±0.2%, ±10 msec                                                                                                                                                                                                                  |                                        |
| Setting Error                  | ±10% maximum                                                                                                                                                                                                                     |                                        |
| Insulation Resistance          | 100MW minimum                                                                                                                                                                                                                    |                                        |
| Dielectric Strength            | Between power and output terminals:<br>2,000V AC, 1 minute (SPDT)<br>1,500V AC, 1 minute (DPDT)<br>Between contacts on different poles:<br>1,000V AC, 1 minute (DPDT)<br>Between contacts of the same pole:<br>750V AC, 1 minute |                                        |
| Power Consumption              | AF20: 3.7VA (200V AC, 60Hz)<br>AD24: 0.8W (DC), 1.2VA (AC)                                                                                                                                                                       |                                        |
| Mechanical Life                | 3,000,000 operations minimum                                                                                                                                                                                                     |                                        |
| Electrical Life                | 100,000 operations minimum                                                                                                                                                                                                       |                                        |
| Vibration Resistance           | 100m/sec <sup>2</sup> (approximate 10G)                                                                                                                                                                                          |                                        |
| Shock Resistance               | Operating extremes:<br>100 m/sec <sup>2</sup> (approximate 10G)<br>Damage limits: 500 m/sec <sup>2</sup> (approximate 50G)                                                                                                       |                                        |
| Operating Temperature          | -10 to +50°C                                                                                                                                                                                                                     |                                        |
| Storage Temperature            | -30 to +80°C                                                                                                                                                                                                                     |                                        |
| Operating Humidity             | 45 to 85% RH                                                                                                                                                                                                                     |                                        |
| Weight (approximate)           | 77g                                                                                                                                                                                                                              | 79g                                    |



1. An inrush current flows during the minimum power application time. AF20: approximate 0.4A, AD24: approximate 1.2A
2. GT3F does not read the preset time range shown on the knob after power is turned off. Note that minimizing the preset time, by turning the knob to zero, does not shorten the delay time after power is removed.



Part Numbering List

GT3F

| Mode of Operation       | Rated Voltage Code            | Time Range                 | Output                      | Contact      | Optional Input           | Complete Part Number |             |  |
|-------------------------|-------------------------------|----------------------------|-----------------------------|--------------|--------------------------|----------------------|-------------|--|
|                         |                               |                            |                             |              |                          | 8-Pin                | 11-Pin      |  |
| True-Power<br>OFF-delay | AF20: 100 to 240VAC (50/60Hz) | 0.1 seconds to 600 seconds | 250V AC, 5A,                | Delayed SPDT | Reset                    | GT3F-1AF20           | GT3F-1EAF20 |  |
|                         |                               |                            | 30V DC, 5A (resistive load) |              |                          | GT3F-1AD24           | GT3F-1EAD24 |  |
|                         | AD24: 24V AC/DC               |                            | 250V AC, 3A,                | Delayed DPDT | None (8p)<br>Reset (11p) | GT3F-2AF20           | GT3F-2EAF20 |  |
|                         |                               |                            | 30V DC, 3A (resistive load) |              |                          | GT3F-2AD24           | GT3F-2EAD24 |  |

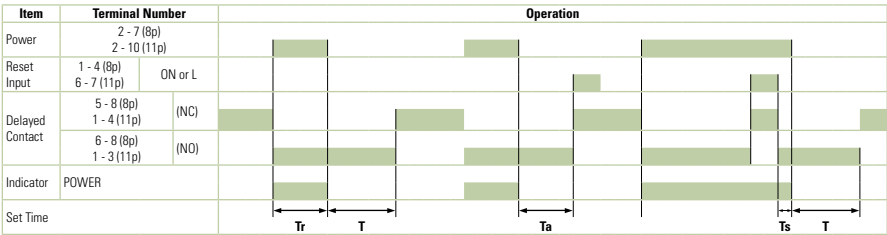
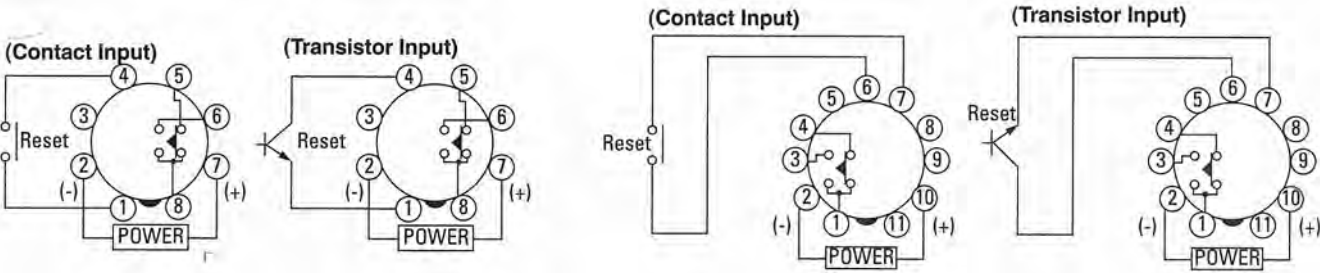


Optional reset input resets the contact to the OFF state before time out.

Timing Diagrams/Schematics

GT3F-1 Timing Diagrams

| GT3F-1 (8-pin)                        | GT3F-1E (11-pin) |
|---------------------------------------|------------------|
| Delayed SPDT Output, with Reset Input |                  |



- T = Set time  
Ta = Shorter than set time  
Ts = 1 Second  
Tr = Minimum Power Application Time  
GT3F-1: 1 Second
1. For time ranges, see page page 854.
  2. For sockets and accessory part numbers, see page page 860.
  3. When power is applied, the NO output contact closes. When power is removed, the timing period begins. When time has elapsed, the NO contact opens.
  4. For the timing diagram overview, see page page 832.

GT3F-2 Timing Diagrams

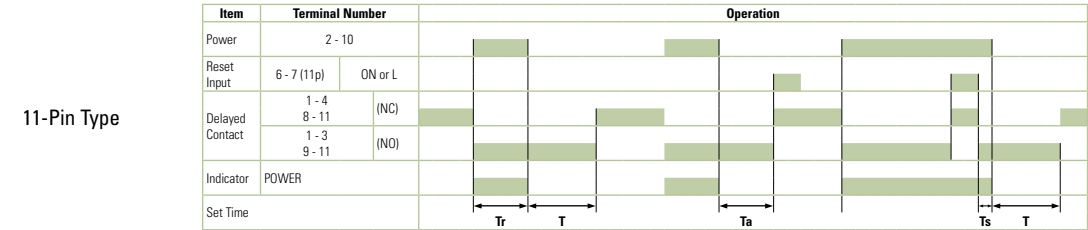
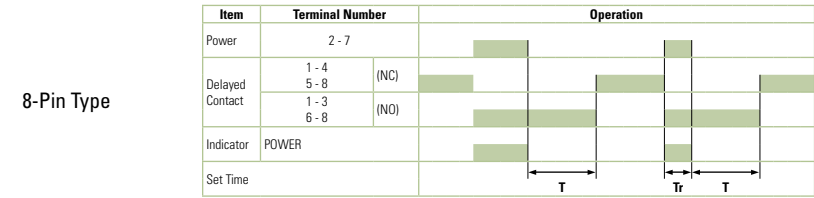
GT3F-2 (8-pin)

GT3F-2E (11-pin)

Delayed DPDT Output

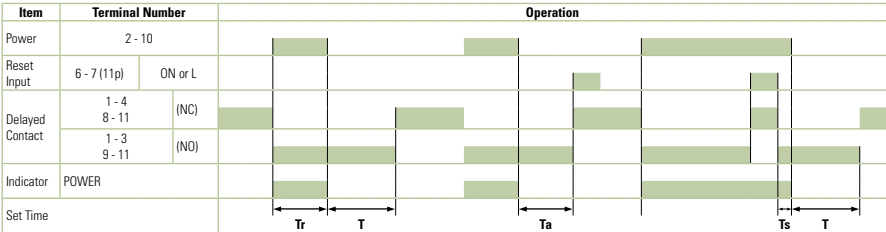
Diagram of the 8-pin GT3F-2 terminal block. Terminals 1 and 2 are marked with (-) and (+) respectively. Terminals 3, 4, 5, 6, 7, and 8 are arranged in a circular pattern. A POWER input is shown connected to terminals 1 and 2.

Diagram of the 11-pin GT3F-2E terminal block. It shows two input configurations: (Contact Input) and (Transistor Input). Both configurations show a Reset input connected to terminals 6 and 7. The (Contact Input) configuration shows a contact connected to terminals 1 and 2. The (Transistor Input) configuration shows a transistor connected to terminals 1 and 2. A POWER input is shown connected to terminals 1 and 2.



When power is applied, the NO contact closes. When power is removed, the timing period begins. When time has elapsed, the NO contact opens. Optional reset input will return contacts to original state before time elapses.

- T = Set time
- T<sub>a</sub> = Shorter than set time
- T<sub>s</sub> = 1 Second
- T<sub>r</sub> = Minimum Power Application Time
- GT3F-1: 1 Second



Instructions: Setting GT3F Series Timers

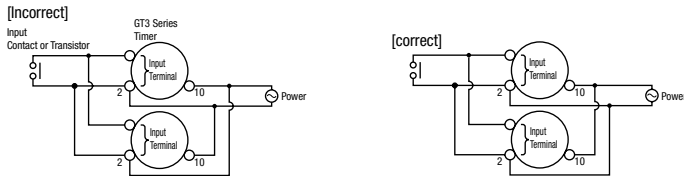


| Step 1                                                        | Desired Operation | Selection       |                       | Remarks                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------|-------------------|-----------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Select a time range that contains the desired period of time. | Base Time Ranges  | ① Dial Selector | ② Time Range Selector | Time range can be selected from 1S and 10S using a flat screwdriver and five different dials of 0 to 1, 0 to 3, 0 to 6, 0 to 18, and 0 to 60 are displayed in the six windows by turning the Dial Selector, allowing for selecting the best suited scale. Note that the switch does not turn infinitely.                        |
|                                                               | 0.1s to 1s        | 0 to 1          | 1s                    |                                                                                                                                                                                                                                                                                                                                 |
|                                                               | 0.1s to 3s        | 0 to 3          |                       |                                                                                                                                                                                                                                                                                                                                 |
|                                                               | 0.1s to 6s        | 0 to 6          |                       |                                                                                                                                                                                                                                                                                                                                 |
|                                                               | 0.1s to 10s       | 0 to 1          | 10s                   |                                                                                                                                                                                                                                                                                                                                 |
|                                                               | 0.3s to 30        | 0 to 3          |                       |                                                                                                                                                                                                                                                                                                                                 |
|                                                               | 0.6s to 60        | 0 to 6          |                       |                                                                                                                                                                                                                                                                                                                                 |
|                                                               | 1.8s to 180s      | 0 to 18         |                       |                                                                                                                                                                                                                                                                                                                                 |
| 6s to 600s                                                    | 0 to 60           |                 |                       |                                                                                                                                                                                                                                                                                                                                 |
| Step 2                                                        |                   |                 |                       | Remarks                                                                                                                                                                                                                                                                                                                         |
| The set time is selected by turning the ③ Setting Knob.       |                   |                 |                       | Setting Examples:<br><br>1. When the Setting Knob ③ is set at 2.5, with Dial Selector ① 0 to 3 and Time Range Selector ② 1S selected, then the set time is 2.5 seconds.<br><br>2. When the Setting Knob ③ is set at 5.0, with Dial Selector ① 0 to 60 and Time Range Selector ② 10S selected, then the set time is 500 seconds. |

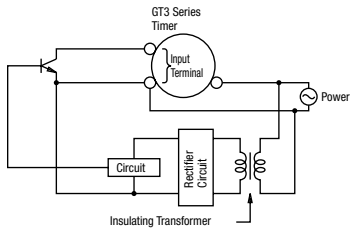
## Instructions: Wiring Inputs

### Inputs of GT3F

To avoid electric shock, do not touch the input signal terminal during power voltage application.  
Never apply the input signals to two or more GT3F timers using the same contact or transistor.



In a transistor circuit for controlling input signals, with its primary and secondary power circuits isolated, do not ground the secondary circuit.



On the GT3F timers, connect the input signals to terminal No.1 and 4 only on the 8-pin type; connect the input signals to terminal No. 6 and 7 only on the 11-pin type. Never apply voltage to other terminals; otherwise, the internal circuit may be damaged.

Input signal lines must be made as short as possible and installed away from power cables and power lines. Use shielded wires or a separate conduit for input wiring.

The GT3F, consisting of a high-impedance circuit, may not be reset due to the influence of an inductive voltage or residual voltage caused by a leakage current. If not reset, connect an RC filter or bleeder resistor between power terminals so that the voltage between power terminals can be reduced to less than 15% of the rated voltage.

## GT3W Series — DualTime Range Timers

## Key features:

- Sequential start, sequential interval, on-delay, recycler, and interval ON timing functions
- 2 time settings in one timer
- 8 selectable operation modes on each model
- Mountable in sockets or flush panel
- Power and output status indicating LEDs
- Time ranges up to 300 hours



## General Specifications

|                                                    |                         |                                                                                                                                                                           |
|----------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation System                                   |                         | Solid state CMOS Circuit                                                                                                                                                  |
| Operation Type                                     |                         | Multi-Mode                                                                                                                                                                |
| Time Range                                         |                         | 1: 0.1sec to 6 hours, 3: 0.1sec to 300 hours                                                                                                                              |
| Pollution Degree                                   |                         | 2 (IE60664-1)                                                                                                                                                             |
| Over Voltage Category                              |                         | III (IE60664-1)                                                                                                                                                           |
| Rated Operational Voltage                          | AF20                    | 100-240V AC(50/60Hz)                                                                                                                                                      |
|                                                    | AD24                    | 24V AC(50/60Hz)/24V DC                                                                                                                                                    |
|                                                    | D12                     | 12V DC                                                                                                                                                                    |
| Voltage Tolerance                                  | AF20                    | 85-264V AC(50/60Hz)                                                                                                                                                       |
|                                                    | AD24                    | 20.4-26.4V AC(50/60Hz)/21.6-26.4V DC                                                                                                                                      |
|                                                    | D12                     | 10.8-13.2V DC                                                                                                                                                             |
| Disengaging Value of Input Voltage                 |                         | Rated Voltage x10% minimum                                                                                                                                                |
| Range of Ambient Operating Temperature             |                         | -10 to +50°C (without freezing)                                                                                                                                           |
| Range of Ambient Storage and Transport Temperature |                         | -30 to +75°C (without freezing)                                                                                                                                           |
| Range of Relative Humidity                         |                         | 35 to 85%RH (without condensation)                                                                                                                                        |
| Atmospheric Pressure                               |                         | 80kPa to 110kPa (Operating), 70kPa to 110kPa (Transport)                                                                                                                  |
| Reset Time                                         |                         | 60msec maximum                                                                                                                                                            |
| Repeat Error                                       |                         | ±0.2%, ±10msec*                                                                                                                                                           |
| Voltage Error                                      |                         | ±0.2%, ±10msec*                                                                                                                                                           |
| Temperature Error                                  |                         | ±0.6%, ±10msec*                                                                                                                                                           |
| Setting Error                                      |                         | ±10% maximum                                                                                                                                                              |
| Insulation Resistance                              |                         | 100MΩ minimum (500V DC)                                                                                                                                                   |
| Dielectric Strength                                |                         | Between power and output terminals: 2000V AC, 1 minute<br>Between contacts of different poles: 2000V AC, 1 minute<br>Between contacts of the same pole: 750V AC, 1 minute |
| Vibration Resistance                               |                         | 10 to 55Hz amplitude 0.75mm <sup>2</sup> hours in each of 3 axes                                                                                                          |
| Shock Resistance                                   |                         | Operating extremes: 98m/sec <sup>2</sup> (approx. 10G)<br>Damage limits: 490m/sec <sup>2</sup> (approx. 50G)<br>3 times in each of 3 axes                                 |
| Degree of Protection                               |                         | IP40 (enclosure), IP20 (socket) (IEC60529)                                                                                                                                |
| Power Consumption (Approx.)                        | AF20                    | 100V AC/60Hz 2.3VA                                                                                                                                                        |
|                                                    |                         | 200V AC/60Hz 4.6VA                                                                                                                                                        |
|                                                    | AD24 (AC/DC) 1.8VA/0.9W |                                                                                                                                                                           |
| Mounting Position                                  |                         | Free                                                                                                                                                                      |
| Dimensions                                         |                         | 40Hx 36W x 70 mm                                                                                                                                                          |
| Weight (Approx.)                                   |                         | 72g                                                                                                                                                                       |

## Contact Ratings

|                                         |                                |                                 |
|-----------------------------------------|--------------------------------|---------------------------------|
| Allowable Contact Power                 |                                | 960VA/120W                      |
| Allowable Voltage                       |                                | 250V AC/150V DC                 |
| Allowable Current                       |                                | 5A                              |
| Maximum permissible operating frequency |                                | 1800 cycles per hour            |
| Rated Load                              | 1/8HP, 240V AC                 |                                 |
|                                         | 3A, 240V AC (Resistive)        |                                 |
|                                         | 5A, 120V AC/30V DC (Resistive) |                                 |
| Conditional Short Circuit               |                                | Fuse 5A, 250V                   |
| Life                                    | Electrical                     | 100,000 op. minimum (Resistive) |
|                                         | Mechanical                     | 20,000,000 op. minimum          |

\* For the value of the error against a preset time, whichever the largest applies.



## Part Number List

## Part Numbers

| Mode of Operation                                                                                                                                                                                                                 | Output                                                    | Contact                                 | Time Range*                                                         | Rated Voltage               | Pin Configuration | New Part Numbers |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------|---------------------------------------------------------------------|-----------------------------|-------------------|------------------|
| A: Sequential Start<br>B: On-delay with course and fine<br>C: Recycler and instantaneous<br>D: Recycler outputs (OFF Start)<br>E: Recycler outputs (ON Start)<br>F: Interval ON<br>G: Interval ON Delay<br>H: Sequential Interval | 3A, 240V AC<br><br>5A, 120V AC/30V DC<br>(Resistive Load) | Delayed<br>SPDT<br>+<br>Delayed<br>SPDT | 1: 0.1sec - 6 hours<br>*(See Time Range Set-<br>tings for details.) | 100 to 240V AC<br>(50/60Hz) | 8 pin             | GT3W-A11AF20N    |
|                                                                                                                                                                                                                                   |                                                           |                                         |                                                                     |                             | 11 pin            | GT3W-A11EAF20N   |
|                                                                                                                                                                                                                                   |                                                           |                                         |                                                                     | 24V AC/DC                   | 8 pin             | GT3W-A11AD24N    |
|                                                                                                                                                                                                                                   |                                                           |                                         |                                                                     |                             | 11 pin            | GT3W-A11EAD24N   |
|                                                                                                                                                                                                                                   |                                                           |                                         |                                                                     | 12V DC                      | 8 pin             | GT3W-A11D12N     |
|                                                                                                                                                                                                                                   |                                                           |                                         |                                                                     |                             | 11 pin            | GT3W-A11ED12N    |
|                                                                                                                                                                                                                                   |                                                           |                                         | 3: 0.1sec - 300 hours                                               | 100 to 240V AC<br>(50/60Hz) | 8 pin             | GT3W-A33AF20N    |
|                                                                                                                                                                                                                                   |                                                           |                                         |                                                                     | 24V AC/DC                   |                   | GT3W-A33AD24N    |

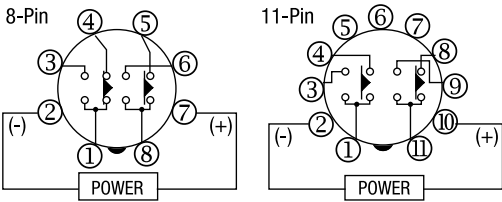


1. For timing diagrams and schematics, see page 858.
2. For socket and accessory part number information, see page 860.
3. 8- and 11-pin models differ only in the number of pins (extra pins are not used).
4. For the timing diagram overview, see page 832.
5. \*For details on setting time ranges, see the instructions on page 859.

## Time Range Table

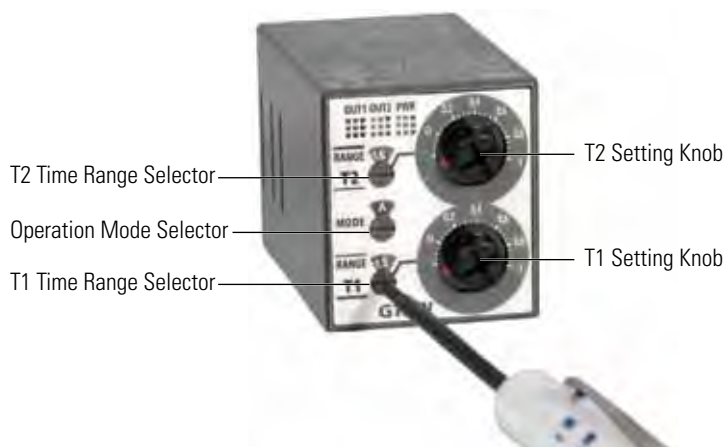
| Time Range Code: 1  |       |                  | Time Range Code: 3  |        |                     |
|---------------------|-------|------------------|---------------------|--------|---------------------|
| Time Range Selector | Scale | Time Range       | Time Range Selector | Scale  | Time Range          |
| 1S                  | 0-1   | 0.1 sec - 1 sec  | 1S                  | 0 - 3  | 0.1 sec - 3 sec     |
| 10S                 |       | 0.3 sec - 10 sec | 1M                  |        | 3 sec - 3 min       |
| 10M                 |       | 15 sec - 10 min  | 1H                  |        | 3 min - 3 hours     |
| 1S                  | 0 - 6 | 0.1 sec - 6 sec  | 1S                  | 0 - 30 | 0.6 sec - 30 sec    |
| 10S                 |       | 1 sec - 60 sec   | 1M                  |        | 36 sec - 30 min     |
| 1M                  |       | 6 sec - 6 min    | 1H                  |        | 36min - 30 hours    |
| 10M                 |       | 1 min - 60 min   | 10H                 |        | 6 hours - 300 hours |
| 1H                  |       | 6 min - 6 hours  |                     |        |                     |

Timing Diagrams/Schematics



| Mode                             | Operation Chart     |                      |           |                               | Mode                           | Operation Chart     |                      |           |                               |
|----------------------------------|---------------------|----------------------|-----------|-------------------------------|--------------------------------|---------------------|----------------------|-----------|-------------------------------|
| A: Sequential Start              | Item                | Terminal No.         | Operation | Description                   | E: Recycler outputs (ON Start) | Item                | Terminal No.         | Operation | Description                   |
|                                  | Power               | 2-7                  |           |                               |                                | Power               | 2-7                  |           |                               |
|                                  | Delayed Contact Ry1 | 1-4 (NC)<br>1-3 (NO) |           | ON after T1                   |                                | Delayed Contact Ry1 | 1-4 (NC)<br>1-3 (NO) |           | ON during T1<br>OFF during T2 |
|                                  | Delayed Contact Ry2 | 5-8 (NC)<br>6-8 (NO) |           | ON after T1 + T2              |                                | Delayed Contact Ry2 | 5-8 (NC)<br>6-8 (NO) |           | ON during T1<br>OFF during T2 |
| B: On-delay with course and fine | Indicator           | OUT1<br>OUT2         |           |                               | F: Interval ON                 | Indicator           | OUT1<br>OUT2         |           |                               |
|                                  | Set Time            |                      |           |                               |                                | Set Time            |                      |           |                               |
|                                  | Item                | Terminal No.         | Operation | Description                   |                                | Item                | Terminal No.         | Operation | Description                   |
|                                  | Power               | 2-7                  |           |                               |                                | Power               | 2-7                  |           |                               |
| C: Recycler and instantaneous    | Delayed Contact Ry1 | 1-4 (NC)<br>1-3 (NO) |           | ON after T1 + T2              | G: Interval ON Delay           | Delayed Contact Ry1 | 1-4 (NC)<br>1-3 (NO) |           | ON during T1                  |
|                                  | Delayed Contact Ry2 | 5-8 (NC)<br>6-8 (NO) |           | ON after T1 + T2              |                                | Delayed Contact Ry2 | 5-8 (NC)<br>6-8 (NO) |           | ON after T1, during T2        |
|                                  | Indicator           | OUT1<br>OUT2         |           |                               |                                | Indicator           | OUT1<br>OUT2         |           |                               |
|                                  | Set Time            |                      |           |                               |                                | Set Time            |                      |           |                               |
| D: Recycler outputs (OFF Start)  | Item                | Terminal No.         | Operation | Description                   | H: Sequential Interval         | Item                | Terminal No.         | Operation | Description                   |
|                                  | Power               | 2-7                  |           |                               |                                | Power               | 2-7                  |           |                               |
|                                  | Delayed Contact Ry1 | 1-4 (NC)<br>1-3 (NO) |           | OFF during T1<br>ON during T2 |                                | Delayed Contact Ry1 | 1-4 (NC)<br>1-3 (NO) |           | ON during T1 + T2             |
|                                  | Delayed Contact Ry2 | 5-8 (NC)<br>6-8 (NO) |           | OFF during T1<br>ON during T2 |                                | Delayed Contact Ry2 | 5-8 (NC)<br>6-8 (NO) |           | ON after T1, during T2        |
|                                  | Indicator           | OUT1<br>OUT2         |           |                               |                                | Indicator           | OUT1<br>OUT2         |           |                               |
|                                  | Set Time            |                      |           |                               |                                | Set Time            |                      |           |                               |
|                                  | Item                | Terminal No.         | Operation | Description                   |                                | Item                | Terminal No.         | Operation | Description                   |
|                                  | Power               | 2-7                  |           |                               |                                | Power               | 2-7                  |           |                               |

## Instructions: Setting GT3W Timer



1. The switches should be securely turned using a flat screwdriver 4mm wide (maximum). Note that incorrect setting may cause malfunction. The switches, which do not turn infinitely, should not be turned beyond their limits.
2. Since changing the setting during timer operation may cause malfunction, turn power off before changing.

## Safety Precautions

Special expertise is required to use Electronic Timers.

- All Electronic Timer modules are manufactured under IDEC's rigorous quality control system, but users must add a backup or fail safe provision to the control system when using the Electronic Timer in applications where heavy damage or personal injury may occur should the Electronic Timer fail.
- Install the Electronic Timer according to instructions described in this catalog.
- Make sure that the operating conditions are as described in the specifications. If you are uncertain about the specifications, contact IDEC in advance.
- In these directions, safety precautions are categorized in order of importance to Warning and Caution.

## Warning

Warning notices are used to emphasize that improper operation may cause severe personal injury or death.

- Turn power off to the Electronic timer before starting installation, removal, Wiring, maintenance, and inspection on the Electronic Timer.
- Failure to turn power off may cause electrical shocks or fire hazard.
- Emergency stop and interlocking circuits must be configured outside the Electronic timer. If such a circuit is configured inside the Electronic Timer, failure of the Electronic timer may cause malfunction of the control system, or an accident.

## Caution

Caution notices are used where inattention might cause personal injury or damage to equipment.

- The Electronic Timer is designed for installation in equipment. Do not install the Electronic Timer outside equipment.
- Install the Electronic Timer in environments described in the specifications. If the Electronic Timer is used in places where it will be subjected to high-temperature, high-humidity, condensation, corrosive gases, excessive vibrations, or excessive shocks, then electrical shocks, fire hazard, or malfunction could result.
- Use an IEC60127-approved fuse and circuit breaker on the power and output line outside the Electronic Timer.
- Do not disassemble, repair, or modify the Electronic Timer.
- When disposing of the Electronic Timer, do so as industrial waste.

Switches & Pilot Lights

Signaling Lights

Relays & Sockets

Timers

Contactors

Terminal Blocks

Circuit Breakers

GT3 Series  
Accessories

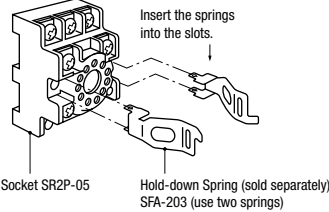
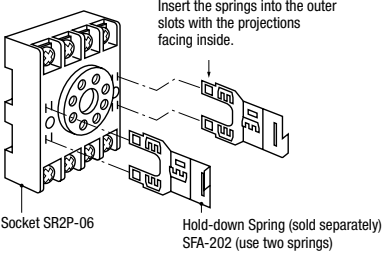
DIN Rail Mounting Accessories

DIN Rail/Surface Mount Sockets and Hold-Down Springs

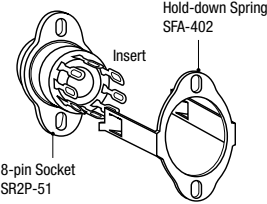
| DIN Rail Mount Socket                |            |                                                                              |          | Applicable Hold-Down Springs |          |
|--------------------------------------|------------|------------------------------------------------------------------------------|----------|------------------------------|----------|
| Style                                | Appearance | Use with Timers                                                              | Part No. | Appearance                   | Part No. |
| 8-Pin Screw Terminal<br>(dual tier)  |            | GT3A-1, 2, 3 (8-pin)<br>GT3F-1, 2 (8-pin)<br>GT3W (8-pin)                    | SR2P-05  |                              | SFA-203  |
| 11-Pin Screw Terminal<br>(dual tier) |            | GT3A-1, 2, 3 (11-pin)<br>GT3A-4, 5, 6<br>GT3F-1, 2 (11-pin)<br>GT3W (11-pin) | SR3P-05  |                              |          |
| 8-Pin Fingersafe Socket              |            | GT3A-1, 2, 3 (8-pin)<br>GT3F-1, 2 (8-pin)<br>GT3W (8-pin)                    | SR2P-05C |                              |          |
| 11-Pin Fingersafe Socket             |            | GT3A-1, 2, 3 (11-pin)<br>GT3A-4, 5, 6<br>GT3F-1, 2 (11-pin)<br>GT3W (11-pin) | SR3P-05C |                              | SFA-202  |
| 8-Pin Screw Terminal                 |            | GT3A-1, 2, 3 (8-pin)<br>GT3F-1, 2 (8-pin)<br>GT3W (8-pin)                    | SR2P-06  |                              |          |
| 11-Pin Screw Terminal                |            | GT3A-1, 2, 3 (11-pin)<br>GT3A-4, 5, 6<br>GT3F-1, 2 (11-pin)<br>GT3W (11-pin) | SR3P-06  |                              |          |
| DIN Mounting Rail<br>Length 1000mm   |            | —                                                                            | BNDN1000 |                              |          |

Installation of Hold-Down Springs

DIN Rail Mount Socket



Panel Mount Socket



## Panel Mounting Accessories

## Panel Mount Sockets and Hold-Down Springs

| Panel Mount Socket     |                                                                                   |                                                    |          | Applicable HD Springs                                                               |          |
|------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------|----------|-------------------------------------------------------------------------------------|----------|
| Style                  | Appearance                                                                        | Use with Timers                                    | Part No. | Appearance                                                                          | Part No. |
| 8-Pin Solder Terminal  |  | GT3A- (8-pin)<br>GT3W- (8-pin)<br>GT3F- (8-pin)    | SR2P-51  |  | SFA-402  |
| 11-Pin Solder Terminal |  | GT3A- (11-pin)<br>GT3W- (11-pin)<br>GT3F- (11-pin) | SR3P-51  |                                                                                     |          |



For information on installing the hold-down springs, see page 860.

## Flush Panel Mount Adapter and Sockets that use an Adapter

| Accessory                                | Description                                 | Appearance                                                                                                                          | Use with Timers   | Part No.  |
|------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|
| Panel Mount Adapter                      | Adaptor for flush panel mounting GT3 timers |                                                   | All GT3 timers    | RTB-G01   |
| Sockets for use with Panel Mount Adapter | 8-pin screw terminal                        | <br>(Shown: SR6P-M08G for Wiring Socket Adapter) | All 8-pin timers  | SR6P-M08G |
|                                          | 11-pin screw terminal                       |                                                                                                                                     | All 11-pin timers | SR6P-M11G |
|                                          | 8-pin solder terminal                       |                                                  | All 8-pin timers  | SR6P-S08  |
|                                          | 11-pin solder terminal                      |                                                  | All 11-pin timers | SR6P-S11  |



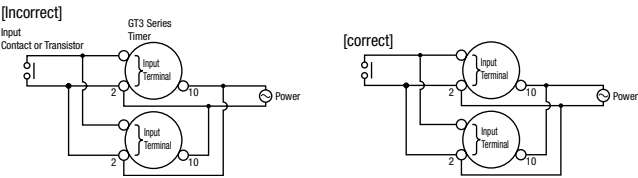
No hold down springs are available for flush panel mounting.

Instructions: Wiring Inputs for GT3 Series

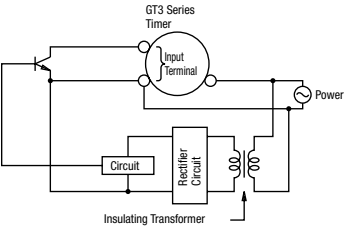
Inputs

To avoid electric shock, do not touch the input signal terminal during power voltage application.

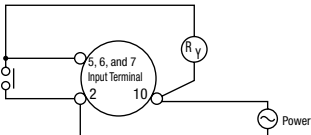
When connecting the input signal terminals of two or more GT3A timers to the same contact or transistor, the input terminals of the same number should be connected. (Connect Terminals No.2 in common.)



In a transistor circuit for controlling input signals, with its primary and secondary power circuits isolated, do not ground the secondary circuit.



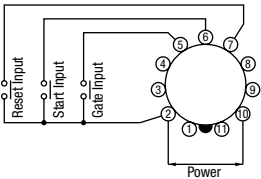
Connect the input signal terminals of the GT3A timers to Terminal No.2 only. Never apply voltage to other terminals; otherwise, the internal circuit may be damaged.



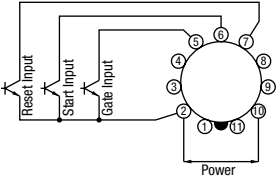
Input signal lines must be made as short as possible and installed away from power cables and power lines. Use shielded wires or a separate conduit for input wiring.

Inputs Instructions, continued

For contact input, use gold-plated contacts to make sure that the residual voltage is less than 1V when the contacts are closed.

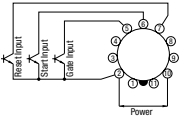


For transistor input, use transistors with the following specifications; VCE = 40V, VCES = 1V or less, IC = 50 mA or more, and ICBO = 50μA or less. The resistance should be less than 1kΩ when the transistor is on. When the output transistor switches on, a signal is input to the timer.



Inputs: GT3A-1, -2, -3

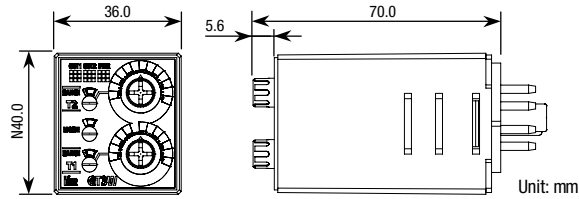
Transistor output equipment such as proximity switches and photoelectric switches can input signals if they are voltage/current output type, with power voltage ranges from 18 to 30V and have 1V. When the signal voltage switches from H to L, a signal is input to the timer



Inputs: GT3A-4, -5, -6

|             |                                                                                              |                                                                                    |
|-------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Start Input | The start input initiates a time-delay operation and controls output status.                 | No-voltage contact inputs and NPN open collector transistor inputs are applicable. |
| Reset Input | When the reset input is activated, the time is reset, and contacts return to original state. | 24V DC, 1mA maximum                                                                |
| Gate Input  | The time-delay operation is suspended while the gate input is on (pause).                    | Input response time: 50msec maximum                                                |

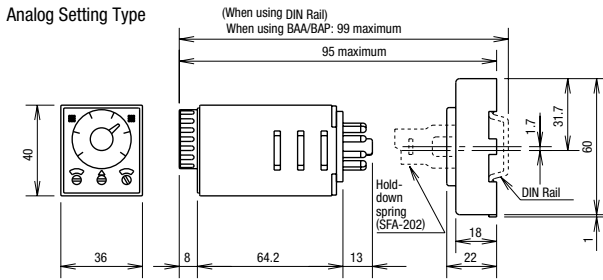
## Dimensions



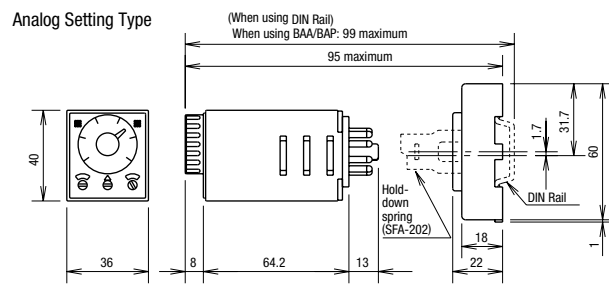
NOTE: GT3W series are UL Listed when used in combination with following IDEC's sockets:  
 GT3W-A11, A33: SR2P-06\* pin type socket.  
 GT3W-A11E: SR3P-05\* pin type socket.  
 (\*-May be followed by A,B,C or U)

The socket to be used with these timers are rated:  
 -Conductor Temperature Rating 60°C min.  
 -Use 14AWG max.(2mm<sup>2</sup>max.) Copper conductors only  
 -Terminal Torque 1.0 to 1.3 N-m

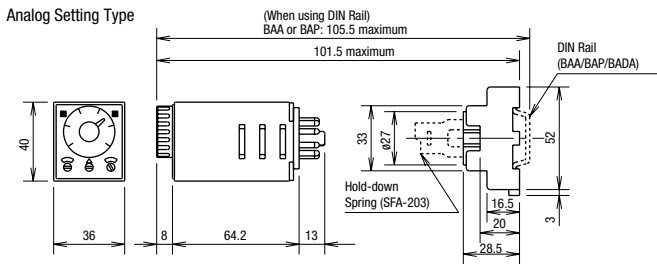
## Analog GT3 Timer, 8-Pin with SR2P-06



## Analog GT3 Timer, 11-Pin with SR3P-06

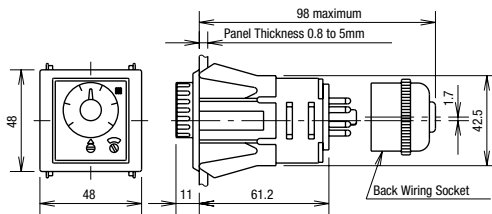


## Analog GT3 Timer, 11-Pin with SR3P-05

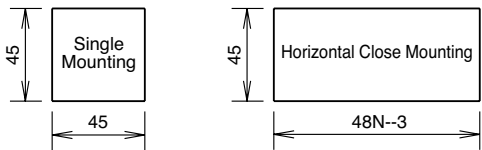


## Panel Mount Adapter

## Analog GT3 Timer, 8-Pin and 11-Pin with SR6P-S08 or SR6P-S11

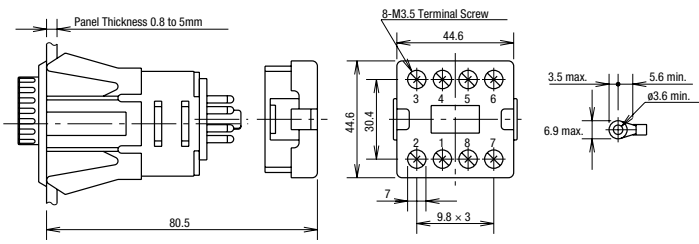


Mounting Hole Layout

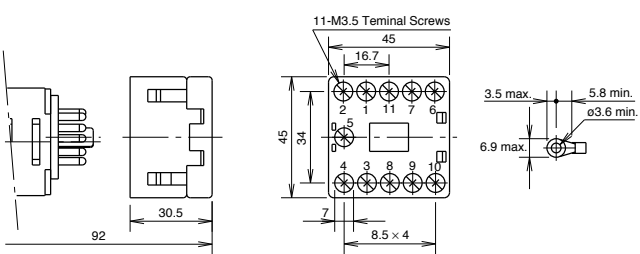


Tolerance:  $+0.5$  to  $0$   
N: No. of timers mounted

GT3 Timer, 8-Pin with SR6P-M08G



GT3 Timer, 11-Pin with SR6P-M11G



Switches & Pilot Lights

Signaling Lights

Relays & Sockets

Timers

Contactors

Terminal Blocks

Circuit Breakers

General Instructions for All Timer Series

Load Current

With inductive, capacitive, and incandescent lamp loads, inrush current more than 10 times the rated current may cause welded contacts and other undesired effects. The inrush current and steady-state current must be taken into consideration when specifying a timer.

Contact Protection

Switching an inductive load generates a counter-electromotive force (back EMF) in the coil. The back EMF will cause arcing, which may shorten the contact life and cause imperfect contact. Application of a protection circuit is recommended to safeguard the contacts.

Temperature and Humidity

Use the timer within the operating temperature and operating humidity ranges and prevent freezing or condensation. After the timer has been stored below its operating temperature, leave the timer at room temperature for a sufficient period of time to allow it to return to operating temperatures before use.

Environment

Avoid contact between the timer and sulfurous or ammonia gases, organic solvents (alcohol, benzine, thinner, etc.), strong alkaline substances, or strong acids. Do not use the timer in an environment where such substances are prevalent. Do not allow water to run or splash on the timer.

Vibration and Shock

Excessive vibration or shocks can cause the output contacts to bounce, the timer should be used only within the operating extremes for vibration and shock resistance. In applications with significant vibration or shock, use of hold down springs or clips is recommended to secure a timer to its socket.

Time Setting

The time range is calibrated at its maximum time scale; so it is desirable to use the timer at a setting as close to its maximum time scale as possible. For a more accurate time delay, adjust the control knob by measuring the operating time with a watch before application.

Input Contacts

Use mechanical contact switch or relay to supply power to the timer. When driving the timer with a solid-state output device (such as a two-wire proximity switch, photoelectric switch, or solid-state relay), malfunction may be caused by leakage current from the solid-state device. Since AC types comprise a capacitive load, the SSR dielectric strength should be two or more times the power voltage when switching the timer power using an SSR.

Generally, it is desirable to use mechanical contacts whenever possible to apply power to a timer or its signal inputs. When using solid state devices, be cautious of inrushes and back-EMF that may exceed the ratings on such devices. Some timers are specially designed so that signal inputs switch at a lower voltage than is used to power the timer (models designated as “B” type).

Timing Accuracy Formulas

Timing accuracies are calculated from the following formulas:

Repeat Error = ±  $\frac{1 \times \text{Maximum Measured Value} - \text{Minimum Measured Value}}{2 \text{ Maximum Scale Value}} \times 100\%$

Voltage Error = ±  $\frac{T_v - T_r}{T_r} \times 100\%$

Tv: Average of measured values at voltage V  
Tr: Average of measured values at the rated voltage

Temperature Error = ±  $\frac{T_t - T_{20}}{T_{20}} \times 100\%$

Tt: Average of measured values at °C  
T20: Average of measured values at 20°C

Setting Error = ±  $\frac{\text{Average of Measured Values} - \text{Set Value}}{\text{Maximum Scale Value}} \times 100\%$

Switches & Pilot Lights  
Signaling Lights  
Relays & Sockets  
Timers  
Contactors  
Terminal Blocks  
Circuit Breakers